10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RNF168 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17270b

Specification

RNF168 Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	Q8IYW5
Other Accession	NP_689830.2
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**65020**
Antigen Region	**468-496**

RNF168 Antibody (C-term) - Additional Information

Gene ID 165918

Other Names
E3 ubiquitin-protein ligase RNF168, hRNF168, 632-, RING finger protein 168, RNF168

Target/Specificity
This RNF168 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 468-496 amino acids from the C-terminal region of human RNF168.

Dilution
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
RNF168 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

RNF168 Antibody (C-term) - Protein Information

Name RNF168 {ECO:0000255|HAMAP-Rule:MF_03066}

Function E3 ubiquitin-protein ligase required for accumulation of repair proteins to sites of DNA

damage. Acts with UBE2N/UBC13 to amplify the RNF8-dependent histone ubiquitination. Recruited to sites of DNA damage at double-strand breaks (DSBs) by binding to ubiquitinated histone H2A and H2AX and amplifies the RNF8-dependent H2A ubiquitination, promoting the formation of 'Lys-63'-linked ubiquitin conjugates. This leads to concentrate ubiquitinated histones H2A and H2AX at DNA lesions to the threshold required for recruitment of TP53BP1 and BRCA1. Also recruited at DNA interstrand cross-links (ICLs) sites and promotes accumulation of 'Lys-63'-linked ubiquitination of histones H2A and H2AX, leading to recruitment of FAAP20/C1orf86 and Fanconi anemia (FA) complex, followed by interstrand cross-link repair. H2A ubiquitination also mediates the ATM-dependent transcriptional silencing at regions flanking DSBs in cis, a mechanism to avoid collision between transcription and repair intermediates. Also involved in class switch recombination in immune system, via its role in regulation of DSBs repair. Following DNA damage, promotes the ubiquitination and degradation of JMJD2A/KDM4A in collaboration with RNF8, leading to unmask H4K20me2 mark and promote the recruitment of TP53BP1 at DNA damage sites. Not able to initiate 'Lys-63'-linked ubiquitination in vitro; possibly due to partial occlusion of the UBE2N/UBC13-binding region. Catalyzes monoubiquitination of 'Lys-13' and 'Lys-15' of nucleosomal histone H2A (H2AK13Ub and H2AK15Ub, respectively).

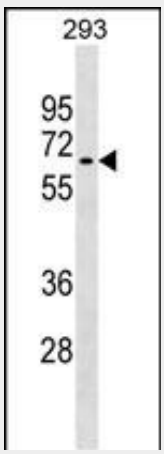
Cellular Location
Nucleus {ECO:0000255|HAMAP-Rule:MF_03066, ECO:0000269|PubMed:19203578, ECO:0000269|PubMed:19203579, ECO:0000269|PubMed:19500350, ECO:0000269|PubMed:21041483, ECO:0000269|PubMed:22742833}. Note=Localizes to double-strand breaks (DSBs) sites of DNA damage. {ECO:0000255|HAMAP-Rule:MF_03066}

RNF168 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

RNF168 Antibody (C-term) - Images



RNF168 Antibody (C-term) (Cat. #AP17270b) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the RNF168 antibody detected the RNF168 protein (arrow).

RNF168 Antibody (C-term) - Background

The complex repair response elicited by DNA double-strand breaks (DSBs) includes recruitment of several DNA repair proteins and ubiquitination of H2A-type histones (see MIM 142720). RNF168 is an E3 ubiquitin ligase critical for DSB repair (Stewart et al., 2009 [PubMed 19203578]).

RNF168 Antibody (C-term) - References

Lilley, C.E., et al. EMBO J. 29(5):943-955(2010)
Noon, A.T., et al. Nat. Cell Biol. 12(2):177-184(2010)
Ramachandran, S., et al. Proc. Natl. Acad. Sci. U.S.A. 107(2):809-814(2010)
Doil, C., et al. Cell 136(3):435-446(2009)
Stewart, G.S., et al. Cell 136(3):420-434(2009)